



ROSS PRODUCTS DIVISION • ABBOTT LABORATORIES

1250 WEST MARICOPA HIGHWAY • CASA GRANDE, ARIZONA 85222-5598

September 27, 2000

The Performance Track Information Center
c/o Industrial Economics Incorporated
2067 Massachusetts Avenue
Cambridge, MA 02140

Larry Twigg
Manager, Environmental, Health and Safety
Abbott Laboratories
Ross Products Division
1250 West Maricopa Highway
Casa Grande, AZ 85222

To Whom It May Concern,

Please accept this application in USEPA's Performance Achievement Track program on behalf of Abbott's Laboratories, Ross Products Division, Casa Grande facility located in Casa Grande, AZ. Our facility has demonstrated an ongoing commitment to continuously improving its environmental performance over the last several years, and is a top performer in its division, globally in the corporation, and in the community. Ross staff at all levels looks forward to the opportunity to work toward the facility's future environmental commitments on a transparent basis, and to supporting this and future USEPA partnership programs.

Should you have any questions about the application or require supplemental information, please do not hesitate to contact me at (520) 421-6294, or Mr. Ron Thielenhaus, Casa Grande's Plant Manager, at (520) 421-6600.

Yours Truly,

Larry Twigg
Abbott Laboratories
Ross Products Division

cc: Ron Thielenhaus (w/enclosure)
Bill Lechner (w/enclosure)
Debbie Hammond

AO9-0023



***National
Environmental
Achievement Track***

Application Form

Ross Products

Name of facility

Abbott Laboratories

Name of parent company (if any)

1250 W. Maricopa Highway

Street address

Street address (continued)

Casa Grande, Arizona 85222

City/State/Zip code

Give us information about your contact person for the
National Environmental Achievement Track Program.

Name Ron Thielenhaus

Title Plant Manager

Phone (520) 421-6600

Fax (520) 421-6259

E-mail Ronald.Thielenhaus@abbott.com

Why do we need this information?

EPA needs background information on your facility to evaluate your application.

What do you need to do?

- Provide background information on your facility.
- Identify your environmental requirements.

Section A

Tell us about your facility.

1 What do you do or make at your facility?

Ross Products is a maker of scientifically formulated nutritional products for normal and special dietary needs from infancy through adulthood. Specific brands manufactured at the Casa Grande facility include but are not limited to Ensure, Similac, Jevity, and Isomil. Both liquid and powder formulations are processed at Casa Grande. Manufacture of various size metal cans is also performed on site.

2 List the Standard Industrial Classification (SIC) code(s) or North American Industrial Classification System (NAICS) codes that you use to classify business at your facility.

SIC
2023 3411 2099

NAICS

3 Does your company meet the Small Business Administration definition of a small business for your sector?

☐ Yes ☒ No

4 How many employees (full-time equivalents) currently work at your facility?

- ☐ Fewer than 50
☐ 50-99
☒ 100-499
☐ 500-1,000
☐ More than 1,000

Section A, continued

5 Does your facility have an EPA ID number(s)?

☒ Yes

☐ No

If yes, list in the right-hand column.

AZD981399892

6 Identify the environmental requirements that apply to your facility. Use the Environmental Requirements Checklist, at the back of the instructions, as a reference. List your requirements to the right **or** enclose a completed Checklist with your application.

See attached checklist

7 Check the appropriate box in the right-hand column.

☐ I've listed the requirements above.

☒ I've enclosed the Checklist with my application.

8 Optional: Is there anything else you would like to tell us about your facility?

The Ross Products Casa Grande plant for many years has been environmentally proactive, and in close touch with the local community on many issues. Plant employees are members of the local water commission, the local emergency planning committee, the Chamber of Commerce and the Arizona Association of Industries. In 1997, the plant was selected by the Arizona Association of Industries as Plant of the Year for its efforts on the environmental front as well as in community involvement, education and development of employees, foreign business activity, and economic development. More recently, the plant has spearheaded an arrangement with a private energy company to locate a merchant power plant on adjacent property that will bring both economic and environmental benefits not only to Ross, but to the energy company and the local POTW as well (see Section C, Future Commitments, Second Aspect).

From plant management to operations staff, Ross Casa Grande employees understand the environmental implications of their actions as well as the influence they can have on suppliers and other partners with which they do business, and are continuously striving to improve the environments in which Ross products are made, used, and

ultimately disposed. A material control manager for the plant was honored in July 2000 with an Abbott Laboratories Environmental, Health, Safety and Energy (EHS&E) Excellence Award for his outstanding leadership on EHS&E issues. This was one of only two individual leadership awards given to Abbott employees worldwide at this year's event.

Why do we need this information?

Facilities must have an operating Environmental Management System (EMS) that meets certain requirements.

What do you need to do?

- Confirm that your EMS meets the Achievement Track requirements.
- Tell us if you have completed a self-assessment or have had a third-party assessment of your EMS.

Section B

Tell us about your EMS.

1 Check **yes** if your EMS meets the requirements for each element below as defined in the instructions.

a. Environmental policy ☒ Yes

b. Planning ☒ Yes

c. Implementation and operation ☒ Yes

d. Checking and corrective action ☒ Yes

e. Management review ☒ Yes

2 Have you completed at least one EMS cycle (plan-do-check-act)? ☒ Yes

3 Did this cycle include both an EMS and a compliance audit? ☒ Yes

4 Have you completed an objective self-assessment or third-party assessment of your EMS? ☒ Yes

If yes, what method of EMS assessment did you use?

☐ Self-assessment

☐ GEMI

☐ Other

☐ CEMP

☒ Third-party assessment

☐ ISO 14001 Certification

☒ Other GEMI

Why do we need this information?

Facilities must show that they are committed to improving their environmental performance. This means that you can describe past achievements and will make future commitments.

What do you need to do?

Refer to the Environmental Performance Table in the instructions to answer questions 1 and 2.

Section C

Tell us about your past achievements and future commitments.

- 1 Describe your past achievements for at least two environmental aspects. If you need more space than is provided, attach copies of this page.

Note to small facilities: If you qualify as a small facility as defined in the instructions, you are required to report past achievement for at least one environmental aspect.

First aspect you've selected

| What aspect have you selected? | What was the previous level (2 years ago)? | | What is the current level? | |
|---|--|--------|---|--------|
| | Quantity | Units | Quantity | Units |
| Water Use/Hazardous Materials Use | 7.4 million - water 27,000 - chemicals | gal/yr | 3.7 million - water 13,500 - chemicals | gal/yr |
| <p>i. How is the current level an improvement over the previous level?</p> <p>By reducing the frequency of chemical cleaning necessary for the process dryer from between two and three times per week to once per week, total water usage at the plant has been reduced by approximately 3.7 million gallons/year, and incidental chemical usage (in the form of aqueous phosphoric acid, sodium hydroxide, and ethylenediamine tetraacetic acid) has been reduced by 13,500 gallons/year. Water is a valuable commodity in Arizona and locally the municipal water source is ground water wells. The reduction in water use at the plant represented by this improvement translates to nearly 12 acre-feet/yr of aquifer depletion no longer experienced in Casa Grande. [Levels noted above are for the dryer cleaning only, not plantwide.]</p> <p>ii. How did you achieve this improvement?</p> <p>Through the application of EMS and quality principles, it was discovered that air flow patterns in the process dryer were causing a buildup of dried product on the inside walls of the dryer, resulting in the need for frequent chemical cleanings and loss of product. A multidisciplinary team of engineers, quality, and operations staff designed and installed special baffles in the dryer to alter the airflow and significantly slow the rate of product buildup. As a side benefit of this improvement, high strength (BOD) wastewater generated by the excess cleanings was effectively eliminated.</p> | | | | |

Second aspect you've selected

| What aspect have you selected? | What was the previous level (2 years ago)? | | What is the current level? | |
|---|--|-------|----------------------------|-------|
| | Quantity | Units | Quantity | Units |
| BOD Discharges to Water | 1.1 million | lb/yr | 460,000 | lb/yr |
| <p>i. How is the current level an improvement over the previous level?</p> <p>Reduction in the total BOD loading of the facility discharge is 640,000 pounds on an annual basis, equivalent to a 60% overall reduction. This loading, which was being introduced into the environment via a land application program, instead increased recovery of material with high nutritional value that can be reused off-site as livestock feed.</p> | | | | |
| <p>ii. How did you achieve this improvement?</p> <p>Off-specification liquid product and first-flush clean-in-place (CIP) rinsate were previously being discharged to an active land application program due to their high strength and nutrient value. The land application program is being phased out in an effort to transition to a discharge-free operation. A diversionary discharge collection system specially designed for this project segregates and collects these high-strength streams for off-site reuse with no residual environmental impact.</p> | | | | |

- 2 Select at least four environmental aspects (no more than two from any one category) from the Environmental Performance Table in the instructions and then tell us about your future commitments. If you need more space than is provided, attach copies of this section.

Note to small facilities: If you are a small facility, you are required to make commitments for at least two environmental aspects in two different categories.

First aspect you've selected

a. What is the aspect?

b. Is this aspect identified as significant in your EMS?

c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.

Packaging Materials Used in Product

☒ Yes ☐ No

☒ Option A:

Absolute value

16.2 g/8-oz. can
(Quantity/Units)

☐ Option B:

In terms of
units of production
or output

(Quantity/Units)

d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.

- ☒ Option A:
Absolute value 15.0 g/8-oz. can
(Quantity/Units)
- ☐ Option B:
In terms of
units of production (Quantity/Units)
or output

e. How will you achieve this improvement?

A feasibility study has already been undertaken to assess options for reducing the weight of packagings associated with Casa Grande's various product lines. The plant's plastic can supplier has worked cooperatively with Ross on this and other supply chain issues. The 8 oz. plastic can was identified as a candidate for a 7.4% reduction in plastic that would not compromise the product during distribution and use. The improvement is expected to be implemented before the end of 2001. Based on expected can volume of at least 128.4 million units in 2001, an estimated 340,000 lbs. of plastic will be diverted from landfills and/or recycling facilities each year.

Second aspect you've selected

a. What is the aspect?

BOD and COD Discharges

b. Is this aspect identified as significant in your EMS?

☒ Yes ☐ No

c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.

- ☒ Option A:
Absolute value 460,000 lb/year
(Quantity/Units)
- ☐ Option B:
In terms of
units of production (Quantity/Units)
or output

d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.

- ☒ Option A:
Absolute value 146,000 lb/year
(Quantity/Units)
- ☐ Option B:
In terms of
units of production (Quantity/Units)
or output

e. How will you achieve this improvement?

The facility has been instrumental in developing a community partnership with an energy company that is now in the process of constructing a merchant power plant immediately adjacent to the facility (see attached cover article from the Summer 2000 edition of The Abbott Engineer). It is planned that ultimately the remaining wastewater discharged from the Ross facility in the existing land application program could be pretreated either by the POTW or the facility itself, and subsequently reused by the merchant power plant to satisfy its cooling water needs. Any sludges generated from the pretreatment process would likely be of sufficient quality to reuse as livestock feed amendment or would continue to be land applied, if allowable. Because the local POTW already redistributes virtually 100% of its effluent to local golf courses and other

facilities for irrigation purposes, the proposed arrangement would effectively eliminate discharges from all three sites, and achieve Ross' goal to have a nearly zero-discharge facility. Based on the energy company's schedule for construction and scaling up its capacity, it is expected that this improvement would be realized by the end of 2003.

Third aspect you've selected

a. What is the aspect?

Water Use

b. Is this aspect identified as significant in your EMS?

☒ Yes ☐ No

c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.

☒ Option A:
Absolute value

5.0 million gal/year RO
sidestream waste
(Quantity/Units)

☐ Option B:
In terms of
units of production
or output

(Quantity/Units)

d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.

☒ Option A:
Absolute value

0 gal/year RO sidestream
waste
(Quantity/Units)

☐ Option B:
In terms of
units of production
or output

(Quantity/Units)

e. How will you achieve this improvement?

The facility currently utilizes a reverse osmosis (RO) treatment system to generate ultra-pure ingredient water for use in its products. Due to operating and maintenance constraints on the RO system, it is necessary to sometimes treat ingredient water in volumes exceeding what is needed for production purposes. Unfortunately, some of this excess ultra-pure water goes unused in the plant and is discharged directly to the sewer. Preliminary plans are in place to establish alternatives for recirculating the excess water back into the RO system, reducing city water consumption while continuing to meet the operating requirements of the system. This project is scheduled for implementation sometime in 2001.

Fourth aspect you've selected

a. What is the aspect?

Hazardous Materials Use

b. Is this aspect identified as significant in your EMS?

☐ Yes ☒ No

c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.

☒ Option A:
Absolute value

5,000 lb/year chemical
biocides in cooling systems
(Quantity/Units)

☐ Option B:
In terms of
units of production
or output

(Quantity/Units)

d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.

☒ Option A:
Absolute value

0 lb/year chemical biocides
in cooling systems
(Quantity/Units)

☐ Option B:
In terms of
units of production
or output

(Quantity/Units)

e. How will you achieve this improvement?

A new ozonation process will replace chemical biocides including bromine, isothiazolins, and glutaraldehyde currently used in the plant cooling tower, ammonia condensers, and the frigid water systems. Ozone (O₃) has been shown for several years to be an effective biocide at low concentrations and without the side effect of generating significant hazardous chemical emissions. It is also believed that by eliminating the large molecular biocides from the water streams that the conductivity of the streams will decrease, consequently reducing the frequency of blowdowns. It is reported that reduction in blowdowns could reduce total cooling water use by as much as 40% in addition to the reduced chemical usage.

Why do we need this information?

Facilities must demonstrate their commitment to public outreach and performance reporting. You should have appropriate mechanisms in place to identify community concerns, to communicate with the public, and to provide information on your environmental performance.

What do you need to do?

- Describe your approach to public outreach.
- List three references who are familiar with your facility.

Section D

Tell us about your public outreach and reporting.

1 How do you identify and respond to community concerns?

Several of the plant management staff regularly participate on local and state environmental panels, boards, and in other activities where the public is allowed an opportunity to participate and communicate directly with senior plant staff. Additionally, the plant routinely provides community members and others with tours of the plant upon request. These interactions provide facility staff with an opportunity both to get involved in local and regional environmental issues that may impact the facility (and hence the local community), as well as to provide an opportunity for community members to better understand facility operations and pose any issues they may have to plant staff. Any complaints or concerns received are documented and routed through the Plant Manager for direct involvement, or delegation as appropriate dependent on the situation. Any serious concerns identified are responded to promptly and directly by the Plant Manager or his designee via a personal or group meeting followed up with documentation. Any response or necessary corrective action is documented and tracked to closure.

2 How do you inform community members of important matters that affect them?

Typically, significant issues will be presented as necessary through venues such as the Chamber of Commerce or other public meetings and supplemental newspaper notices. Such issues might include those relating to Ross' involvement in the Reliant Energy project, disaster planning episodes, or others that can be anticipated and addressed in advance. Other issues such as those relating to an unexpected facility incident like a fire or hazardous chemical release would be addressed through usual agency reporting practices, with supplemental follow-up notification to the media as appropriate based on the circumstances.

3 How will you make the Achievement Track Annual Performance Report available to the public?

☒ Website www.abbott.com

☐ Newspaper

☐ Open Houses

☒ Other

through Casa Grande Chamber of Commerce and
Arizona Association of Industries distribution

4 Are there any ongoing citizen suits against your facility? ☐ Yes ☒ No

If yes, describe briefly in the right-hand column.

5 List references below

| | Organization | Name | Phone number |
|--|--|--------------------------------------|----------------|
| Representative of a Community/ Citizen Group | Casa Grande Valley Economic Development Foundation | Lori Gary, Executive Director | (520) 836-6868 |
| State/Local Regulator | Pinal County Air Quality Control District | Don Gabrielson, Director | (520) 868-6915 |
| Other community/local reference | Casa Grande Chamber of Commerce | Helen Neuharth, President and CEO | (520) 836-2125 |

Section E

Application and Participation Statement

On behalf of Ross Products Casa Grande plant,
[my facility],

I certify that

- I have read and agree to the terms and conditions, as specified in the *National Environmental Achievement Track Program Description* and in the *Application Instructions*;
- I have personally examined and am familiar with the information contained in this Application (including, if attached, the Environmental Requirements Checklist). The information contained in this Application is, to the best of my knowledge and based on reasonable inquiry, true, accurate, and complete, and I have no reason to believe the facility would not meet all program requirements;
- My facility has an environmental management system (EMS), as defined in the Achievement Track EMS requirements, including systems to maintain compliance with all applicable federal, state, tribal, and local environmental requirements, in place at the facility, and the EMS will be maintained for the duration of the facility's participation in the program;
- My facility has conducted an objective assessment of its compliance with all applicable federal, state, tribal, and local environmental requirements, and the facility has corrected all identified instances of potential or actual noncompliance;
- Based on the foregoing compliance assessment and subsequent corrective actions (if any were necessary), my facility is, to the best of my knowledge and based on reasonable inquiry, currently in compliance with applicable federal, state, tribal, and local environmental requirements.

I agree that EPA's decision whether to accept participants into or remove them from the National Environmental Achievement Track is wholly discretionary, and I waive any right that may exist under any law to challenge EPA's acceptance or removal decision.

I am the senior facility manager and fully authorized to execute this statement on behalf of the corporation or other legal entity whose facility is applying to this program.

Signature/Date

Printed Name/Title

Ron Thielenhaus

9/24/2000

Facility Name Ross Products - Casa Grande

Facility Street Address 1250 W. Maricopa Highway

Facility ID Numbers AZD981399892 (RCRA Generator Id)
85222RSSLB1250W (TRI Facility Id)
B30641.00 (Arizona DEQ Air Permit)

National Environmental Achievement Track

Environmental Requirements Checklist

The following Checklist is provided to assist facilities in answering Section A, "Tell us about your facility," Question 6. The Checklist is given to help facilities identify the major federal, state, tribal, and local environmental requirements applicable at their facilities. The Checklist is not intended to be an exhaustive list of all environmental requirements that may be applicable at an individual facility.

If you use this Checklist and choose to submit it with your application, fill in your facility information below and enclose the completed Checklist with your application (see instructions).

Facility Name Ross Products
Facility Location: Casa Grande, Arizona
Facility ID Number(s): AZD981399892 (RCRA Generator Id.)
(attach additional sheets if necessary) 85222RSSLB125OW (TRI Facility Id.)
B30641.00 (Arizona DEQ Air Permit)

Air Pollution Regulations

Check All
That Apply

1. National Emission Standards for Hazardous Air Pollutants (40 CFR 61) ☐
2. Permits and Registration of Air Pollution Sources ☒
3. General Emission Standards, Prohibitions and Restrictions ☒
4. Control of Incinerators ☐
5. Process Industry Emission Standards ☐
6. Control of Fuel Burning Equipment ☒
7. Control of VOCs ☒
8. Sampling, Testing and Reporting ☒
9. Visible Emissions Standards ☒
10. Control of Fugitive Dust ☒
11. Toxic Air Pollutants Control ☐
12. Vehicle Emissions Inspections and Testing ☐

Other Federal, State, Tribal or Local Air Pollution Regulations Not Listed Above (identify)

13. Pinal County Air Quality Control District Regulations ☒
14. Risk Management Planning (40 CFR 68) Requirements ☒

Hazardous Waste Management Regulations

1. Identification and Listing of Hazardous Waste (40 CFR 261)
 - Characteristic Waste ☒
 - Listed Waste ☒
2. Standards Applicable to Generators of Hazardous Waste (40 CFR 262)
 - Manifesting ☒

- Pre-transport requirements ☒
- Record keeping/reporting ☒
- 3. Standards Applicable to Transporters of Hazardous Waste (40 CFR 263)
 - Transfer facility requirements ☐
 - Manifest system and record-keeping ☐
 - Hazardous waste discharges ☐
- 4. Standards for Owners and Operators of TSD Facilities (40 CFR 264)
 - General facility standards ☐
 - Preparedness and prevention ☐
 - Contingency plan and emergency procedures ☐
 - Manifest system, Record keeping and reporting ☐
 - Groundwater protection ☐
 - Financial requirements ☐
 - Use and management of containers ☐
 - Tanks ☐
 - Waste piles ☐
 - Land treatment ☐
 - Incinerators ☐
- 5. Interim Status Standards for TSD Owners and Operators (40 CFR 265) ☐
- 6. Interim Standards for Owners and Operators of New Hazardous Waste Land Disposal Facilities (40 CFR 267) ☐
- 7. Administered Permit Program (Part B) (40 CFR 270) ☐

Other Federal, State, Tribal or Local Hazardous Waste Management Regulations Not Listed Above (identify)

- 8. Not Applicable ☐
- 9. ☐

Hazardous Materials Management

- 1. Control of Pollution by Oil and Hazardous Substances (33 CFR 153) ☐
- 2. Designation of Reportable Quantities and Notification of Hazardous Materials Spill (40 CFR 302) ☒
- 3. Hazardous Materials Transportation Regulations (49 CFR 172-173) ☒
- 4. Worker Right-to-Know Regulations (29 CFR 1910.1200) ☒
- 5. Community Right-to-Know Regulations (40 CFR 350-372) ☒

Other Federal, State, Tribal or Local Hazardous Materials Management Regulations Not Listed Above (identify)

- 6. Not Applicable ☐
- 7. ☐

Solid Waste Management

- 1. Criteria for Classification of Solid Waste Disposal Facilities and Practices (40 CFR 257) ☐
- 2. Permit Requirements for Solid Waste Disposal Facilities ☐
- 3. Installation of Systems of Refuse Disposal ☐

4. Solid Waste Storage and Removal Requirements ☒
5. Disposal Requirements for Special Wastes ☒

Other Federal, State, Tribal or Local Solid Waste Management Regulations Not Listed Above (identify)

6. Not Applicable ☐
7. ☐

Water Pollution Control Requirements

1. Oil Spill Prevention Control and Countermeasures (SPCC) (40 CFR 112) ☒
2. Designation of Hazardous Substances (40 CFR 116) ☐
3. Determination of Reportable Quantities for Hazardous Substances (40 CFR 117) ☐
4. NPDES Permit Requirements (40 CFR 122) ☐
5. Toxic Pollutant Effluent Standards (40 CFR 129) ☐
6. General Pretreatment Regulations for Existing and New Sources (40 CFR 403) ☒
7. Organic Chemicals Manufacturing Point Source Effluent Guidelines and Standards (40 CFR 414) ☐
8. Inorganic Chemicals Manufacturing Point Source Effluent Guidelines and Standards (40 CFR 415) ☐
9. Plastics and Synthetics Point Source Effluent Guidelines and Standards (40 CFR 416) ☐
10. Water Quality Standards ☐
11. Effluent Limitations for Direct Dischargers ☐
12. Permit Monitoring/Reporting Requirements ☒
13. Classifications and Certifications of Operators and Superintendents of Industrial Wastewater Plants ☐
14. Collection, Handling, Processing of Sewage Sludge ☐
15. Oil Discharge Containment, Control and Cleanup ☐
16. Standards Applicable to Indirect Discharges (Pretreatment) ☐

Other Federal, State, Tribal or Local Water Pollution Control Regulations Not Listed Above (identify)

17. Water Reuse Program (R-003-11) ☒
18. Aquifer Protection Permit Program 9AAC-18 (application submitted Feb. 2000, pending approval). ☒

Drinking Water Regulations

1. Underground Injection and Control Regulations, Criteria and Standards (40 CFR 144, 146) ☐
2. National Primary Drinking Water Standards (40 CFR 141) ☐
3. Community Water Systems, Monitoring and Reporting Requirements (40 CFR 141) ☐
4. Permit Requirements for Appropriation/Use of Water from Surface or Subsurface Sources ☐

5. Underground Injection Control Requirements ☐
6. Monitoring, Reporting and Record keeping Requirements for Community Water Systems ☐

Other Federal, State, Tribal or Local Drinking Water Regulations Not Listed Above(identify)

7. ☐
8. ☐

Toxic Substances

1. Manufacture and Import of Chemicals, Record keeping and Reporting Requirements (40 CFR 704) ☐
2. Import and Export of Chemicals (40 CFR 707) ☐
3. Chemical Substances Inventory Reporting Requirements (40 CFR 710) ☐
4. Chemical Information Rules (40 CFR 712) ☐
5. Health and Safety Data Reporting (40 CFR 716) ☐
6. Pre-Manufacture Notifications (40 CFR 720) ☐
7. PCB Distribution Use, Storage and Disposal (40 CFR 761) ☐
8. Regulations on Use of Fully Halogenated Chlorofluoroalkanes (40 CFR 762) ☐
9. Storage and Disposal of Waste Material Containing TCDD (40 CFR 775) ☐

Other Federal, State, Tribal or Local Toxic Substances Regulations Not Listed Above (identify)

10. ☐
11. ☐

Pesticide Regulations

1. FIFRA Pesticide Use Classification (40 CFR 162) ☐
2. Procedures for Disposal and Storage of Pesticides and Containers (40 CFR 165) ☒
3. Certification of Pesticide Applications (40 CFR 171) ☒
4. Pesticide Licensing Requirements ☐
5. Labeling of Pesticides ☒
6. Pesticide Sales, Permits, Records, Application and Disposal Requirements ☐
7. Disposal of Pesticide Containers ☒
8. Restricted Use and Prohibited Pesticides ☒

Other Federal, State, Tribal or Local Pesticides Regulations Not Listed Above (identify)

9. Not Applicable ☐
10. Not Applicable ☐

Environmental Clean-Up, Restoration, Corrective Action

1. Comprehensive Environmental Response, Compensation and Liability Act (Superfund) (identify)
Not applicable ☐

2. RCRA Corrective Action (identify)
Not applicable

☐☐☐

**Other Federal, State, Tribal or Local Environmental Clean-Up, Restoration,
Corrective Action Regulations Not Listed Above (identify)**

3. Not applicable
4.

☐☐

The
Abbott

ENGINEER

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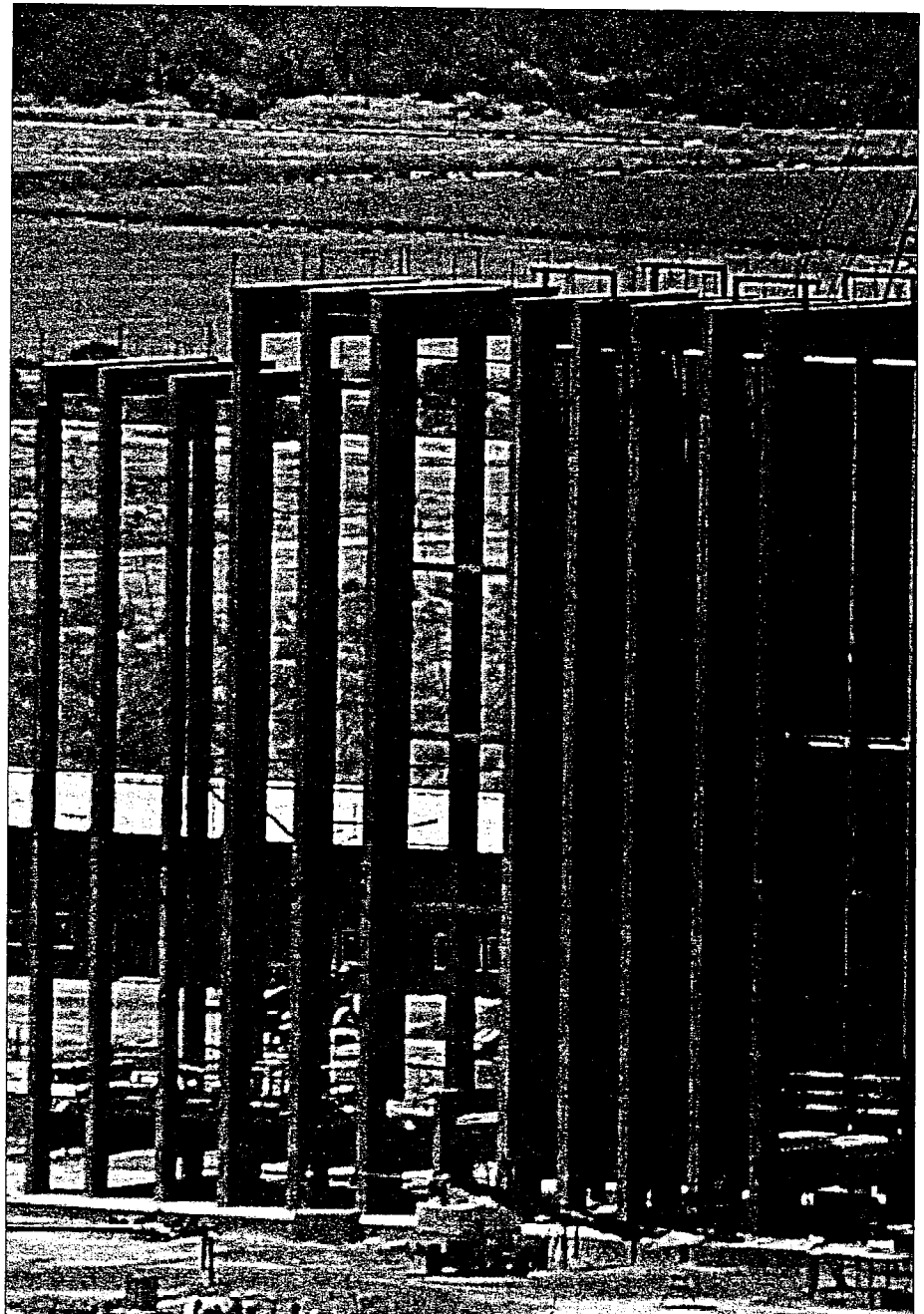
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RPD's Casa Grande Facility Capitalizes on Energy Alternative



All information in this newsletter is confidential.





The Abbott Engineer

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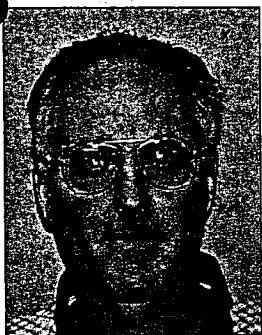
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To submit articles for publication or to be added to the mailing list,
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D542, J28, ext. 7-4330

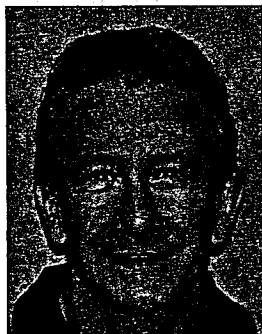
Cover: Construction of the initial structure for the Reliant Energy Merchant Plant is well under way.

RPD's Casa Grande Facility Capitalizes on Energy Alternative

Kelly Rogers and William Thomas



Kelly Rogers, senior electrical engineer, came to Abbott in 1997 after working at RR Donnelley as a plant engineering manager. He earned BS and MS degrees in electrical engineering in 1980 and 1981 and an MBA in 1983, all from Brigham Young University. Kelly is a two-time RPD Engineering Excellence Award winner and a three-time Chairman's Award winner.



William Thomas, who joined the Ross Products Division in 1986, is manager of Plant Engineering at the Casa Grande, Arizona, facility. Before coming to Abbott, Bill held various engineering positions with Elkem Metals Co. (formerly Union Carbide). He received a BS in electrical engineering from the West Virginia University Institute of Technology in 1980. As a mentor, Bill also lends his talents and

expertise to Casa Grande facility employees and Casa Grande High School students. Bill earned a Chairman's Award for both the "Reliant Energy" and "Powder Operations Expansion" projects.

The Abbott Engineer Is Available On-line

You can access the latest issue as well as past issues of *The Abbott Engineer* on-line through CED's home page on the Abbott Wide Web at aww.abbott.com. The on-line newsletter, identical to the printed copy, enables you to print articles of interest from your desktop. Eventually, the on-line version may be enhanced to feature short video clips or 2-D animations of engineering processes or systems.

Driven by energy deregulation and an ongoing commitment to seek energy-efficient alternatives, the Energy Management Team at the Casa Grande, Arizona, facility aggressively sought and then convinced Reliant Energy to build a merchant plant adjacent to the Abbott/Ross Products Division facility. Dubbed the "Reliant Project," the 500-megawatt "Desert Basin Generating Plant" will provide more cost-effective power for the RPD facility.

In the end, both parties came to the bargaining table to forge a mutually beneficial agreement that will provide real savings and cost-avoidance opportunities in the range of \$1 million to \$1.5 million over the LRP to the Casa Grande RPD facility.

Ticking Timeline

As energy deregulation gained momentum in Arizona, we actively explored the energy market over a 10-year period and pursued several options including cogeneration, thermal storage, and a merchant plant. Facing the potential loss of our business, our public utility, Arizona Public Service (APS), offered us various incentives and energy credits through March 1998.

With deregulation becoming more and more imminent, the energy industry developed advanced technology for more efficient generation and distribution systems. As a result, we stepped up our search for alternatives in 1997 and opened our doors to the energy community, including APS. We analyzed 15 bids and whittled the selection to three players by December 1997.

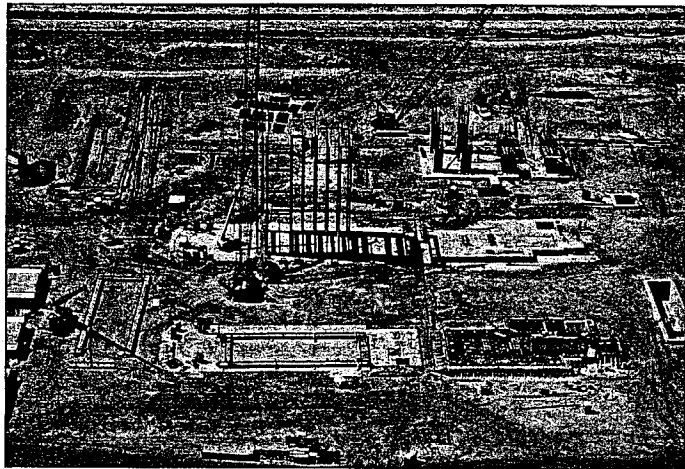
While building and operating an on-site cogeneration plant to provide electricity and steam appeared attractive at first glance, we concluded that the merchant plant was the best approach for our needs. Performance data compiled for the various options also backed the merchant plant option. With the merchant plant arrangement, we gain electricity and natural gas rate benefits through association with a large-volume consumer.

In January 1998, Reliant Energy and its merchant plant approach emerged as the best candidate. In February 1998, we began working with Reliant to etch out the details of an agreement. Division Engineering was key in spearheading

(continued on page 4)

RPD's Casa Grande Facility Capitalizes on Energy Alternative *(continued from page 2)*

the negotiation process with Reliant. **Joy Amundson**, senior vice president, Ross Products, sealed the final energy contract in September 1999, one month before deregulation went into effect in Arizona.



Aerial view of the Reliant Energy site located at the northwest corner of the RPD Casa Grande Facility.

Power Partner

Reliant Energy also looked to benefit from the partnership with Abbott. Reliant, one of the largest natural gas and electricity companies in the U.S., wanted to expand its presence in the Southwest. It had already established itself in Nevada and California, and Casa Grande provided the perfect link to enter the Arizona energy market.

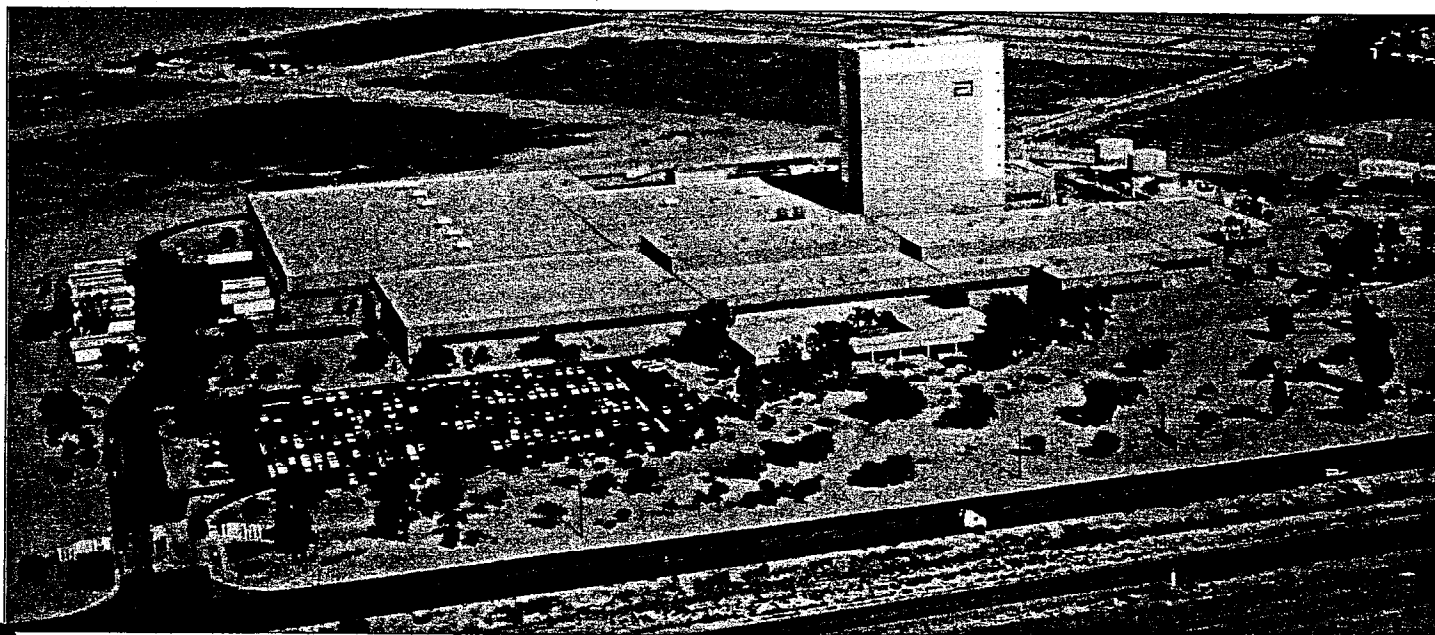
Casa Grande offers proximity to major natural gas distribution lines, the APS power grid, and an adequate supply of water required for cooling towers. Abbott/RPD offered experience and access to city, county, and state contacts. The Casa Grande plant team played a pivotal role in establishing a long-term relationship between city and Reliant Energy officials. Abbott's location, presence in the community, and team networking helped to position the concept with city officials.

Selling 20 acres of Abbott's property to Reliant Energy for the merchant plant put our new power partner right at our doorstep. Construction of the merchant plant began in October 1999. Completion of the Desert Basin Generating Plant is currently planned for July 2001.

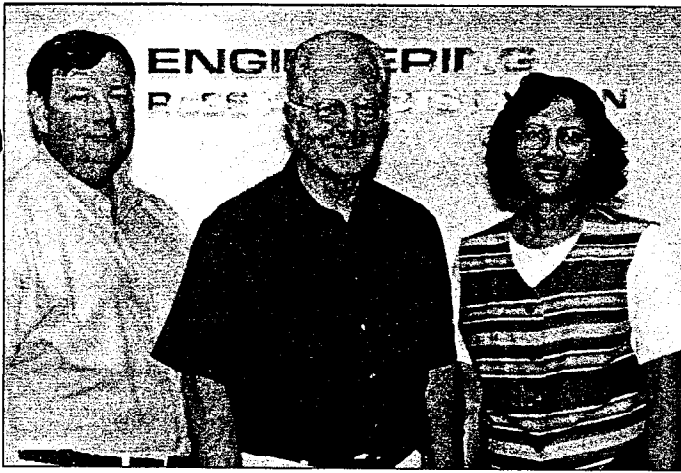
Savings Summary

The Reliant Energy merchant plant has the capacity to generate 100 times more electricity than the Casa Grande facility currently uses. Reliant electricity rates are significantly less than the average cost for Arizona power. Since both the Abbott and Reliant plants utilize natural gas (Abbott for steam and Reliant for its turbines), we are able to team up for block purchases of natural gas, resulting in rate breaks for large-volume purchases.

Pending action in the legislature and by the Corporate Commission in Arizona, large-volume users may realize additional opportunities for discounts, specifically discounts associated with transporting natural gas. The energy cost benefits of this project will have a direct impact on production costs. Being more energy efficient decreases product costs, increases margins, and makes the facility more suitable for expansion.



Aerial view of the RPD Casa Grande, Arizona, facility.



Abbott/RPD Division Team—left to right: Mark Gleim, Roger Wallis, and Corlis Murray.

Additional Advantages

The energy management team at the Casa Grande facility is also negotiating the potential to clean its process wastewater and sell it to Reliant Energy for use in cooling towers. This water would be blended with other water sources to meet the demands of the merchant plant. While RPD would financially benefit from the sale of its “recycled” wastewater, equally important, it helps the Casa Grande facility move one step closer to its goal of becoming a near-zero discharge or “green” plant. Also, reusing RPD wastewater helps Reliant reduce its need for fresh water in the very water-sensitive environment in Arizona. In the end, Abbott Casa Grande strengthens its reputation for being an environmentally sensitive corporate citizen in the community.

Reliant Energy also plans to contract with the City of Casa Grande to reuse the city’s effluent from its wastewater treatment facility. Reliant’s commitment to reuse programs will help sustain water reserves and represents an additional revenue source for the community. In Casa Grande proper, the local community benefits from reduced energy costs,

which makes the city more appealing for economic development. Reliant Energy will add jobs to the community and supplement the local tax base. Furthermore, Reliant has already demonstrated its loyalty to the community by contributing \$300,000 to the school systems and other support for the parks and recreation areas.

As the deregulation process unfolds across the country, the time is right to explore your energy options. A shining example of energy cost management, the Casa Grande Reliant Energy Project proudly serves as a benchmark for other Abbott sites seeking more energy-efficient, cost-sensitive, and environmentally sound alternatives.

Reliant Project Recognition

The highest recognition and thanks go to the team members for persisting and overcoming many challenges over the years to turn this great opportunity into a fruitful reality for Abbott.

Abbott/RPD Casa Grande Plant Team

| | |
|---------------------------|----------------------------|
| David Salyers | Facility/Utility Manager |
| Kelly Rogers | Senior Electrical Engineer |
| Jerry Holysko | Former Engineering Manager |
| William Thomas | Engineering Manager |
| Ronald Thielenhaus | Plant Manager |

Abbott/RPD Division Team

| | |
|----------------------|------------------------------|
| Mark Gleim | Utilities/Facilities Manager |
| Corlis Murray | Former Plant Manager |
| Roger Wallis | Director of Engineering |

Abbott Corporate Team

| | |
|------------------------|----------------------------------|
| Al Musur | Energy/Utilities Manager |
| Lance Wyatt | Vice President |
| Rich Potocek | Corporate Real Estate |
| Dale Johnson | Corporate Legal – Public Affairs |
| Mike Johannesen | Corporate Legal – Domestic |



Abbott Corporate Team—seated, left to right: Dale Johnson and Lance B. Wyatt; standing, left to right: Mike Johannesen, Al Musur, and Rich Potocek.



Abbott/RPD Casa Grande Plant Team—seated, left to right: David Salyers and Ron Thielenhaus; standing, left to right: William Thomas and Kelly Rogers; not pictured: Jerry Holysko.